

# Texas Pension Review Board

## Guide to Public Retirement Systems in Texas

A Comparison of Statutory Public Retirement Systems in Texas

January 2009

**Texas Pension Review Board**  
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**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Table of Contents**

**Executive Summary**

**About the Texas Pension Review Board**

**I. Statewide Plan Information**

Teacher Retirement System .....	1
Optional Retirement Program .....	3
Employees Retirement System .....	4
Law Enforcement and Custodial Officer Supplemental Retirement Fund .....	6
Judicial Retirement System of Texas Plan One .....	8
Judicial Retirement System of Texas Plan Two .....	9
Texas Municipal Retirement System .....	10
Texas County & District Retirement System.....	12
Texas Emergency Services Retirement System .....	14
Texas Local Fire Fighters' Retirement Act .....	16

**II. Special Reports**

Benefit Summary for Statewide Public Retirement Systems .....	17
Benefit Summary for Municipal Pension Plans Governed by State Statute .....	18
Asset Summary for Statewide Public Retirement Systems.....	20
Membership Summary for Statewide Public Retirement Systems .....	21
Asset Summary for Municipal Pension Plans Governed by State Statute .....	22
Membership Summary for Municipal Pension Plans Governed by State Statute .....	23
Actuarial Valuation Summary for Statewide Public Retirement Systems .....	24
Actuarial Valuation Summary for Municipal Pension Plans Governed by State Statute .....	25
Actuarial Assumptions and Methods for Statewide Public Retirement Systems.....	27
Actuarial Assumptions and Methods for Municipal Pension Plans Governed by State Statute .....	28
Paid Fire Fighter Plans Under Texas Local Fire Fighters' Retirement Act .....	29

**III. Glossary of Commonly Used Pension Terms**

**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Executive Summary**

Texas has a long tradition of providing sound retirement systems for its public employees. Employees of the state, cities, counties, and numerous special purpose subdivisions are covered by a wide variety of retirement programs. The funding of retirement programs represents a significant expense for all levels of Texas government; however, the benefit is providing retirement income to retirees who have spent their careers serving in these levels of government.

- The combined assets of the state's public retirement systems are approximately \$190 billion. The total membership of Texas public retirement systems exceeds 2.3 million active and retired members.
- Currently, 387 public retirement systems report to the Texas Pension Review Board. Of these, two systems, Texas County & District Retirement System and Texas Municipal Retirement System, operate as pooled retirement systems. There are 574 member systems in TCDRS and 827 member systems in TMRS. Combining the member systems of TCDRS and TMRS, there are 1,788 public retirement systems in the state.
- Of the 1,401 TMRS/ TCDRS plans, 100 percent have amortization periods under 40 years. Of the 1,495 actuarially-funded defined benefit plans in the state, 99 percent have amortization periods under 40 years. Of the remaining 94 actuarially-funded defined benefit plans (excluding TMRS and TCDRS), 86 percent have amortization periods under 40 years. The plans that currently do not have amortization periods under 40 years are aware of the problem and working with the PRB for a solution.
- The majority of systems in Texas are controlled locally, although state law provides administrative guidelines for all systems as well as direct statutory control of the largest plans.
- The state provides benefits for teachers, higher education personnel at state colleges and universities, legislators, state employees, state judges, district attorneys, volunteer fire fighters, and state-elected officials.
- Besides the systems funded by state appropriations, the Legislature has authority over benefit changes for the statewide Texas Municipal Retirement System and the statewide Texas County & District Retirement System.
- Local systems in Austin, Dallas, El Paso, Fort Worth, Galveston, Houston, and San Antonio are covered by specific state laws.
- The state pays certain administrative costs for the Texas Emergency Services Retirement System.
- Paid and volunteer fire fighters throughout Texas belong to local plans operating under the Texas Local Fire Fighter Retirement Act.

Pension plans for private sector employees are governed by federal law, primarily the Employees Retirement Income Security Act (ERISA), which provides for oversight by the federal Department of Labor's Office of Pension and Welfare Benefits Administration. Even though public plans are increasingly affected by the Internal Revenue Code, and other federal laws such as the Age Discrimination in Employment Act, Congress has refrained from passage of comprehensive federal regulations for public pension plans within states, thereby leaving public retirement system oversight to the states.

**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**About the Texas Pension Review Board**

If a bill is subsequently amended or substituted so that its actuarial effect is changed, another analysis and review must be obtained and another Impact Statement prepared.

During the interim between legislative sessions, pension data is analyzed by PRB staff, summarized, and entered into a database that enables the agency to respond to requests for information. The PRB also acts as a clearinghouse for comprehensive pension information, with staff members providing technical assistance to systems, governments, and public employees through either direct contact, by the regional educational seminars held throughout the state, and by information and links via the PRB website.

**PRB Guidelines for Actuarial Soundness**

1. The funding of a pension plan should reflect all plan liabilities and assets.
2. The allocation of the normal cost portion of contributions should be level as a percent of payroll over all generations of taxpayers.
3. Funding of the unfunded actuarial accrued liability should be level or declining as a percent of payroll over the amortization period.
4. Funding should be adequate to cover the normal cost, and to amortize the unfunded actuarial accrued liability over a period which should never exceed 40 years, with 25-30 years being the more preferable target.
5. The choice of assumptions should be realistic and reasonable in the aggregate.

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Municipal Employees Retirement Systems**

Retirement System	Fiscal Year End	Total Net Assets	Total Members	Contributions Member City	Normal Cost (% Payroll)	Actuarial Value of Assets (\$Millions)	Unfunded Actuarial Liabilities (\$Millions)	Amortization Period Years
Austin Employees	12/31/2007	\$1,698,196,892	12,819	8.00% plus a contribution subsidy (1% as of 12/31/07; 2% effective 10/1/2008)	14.60%	\$1,653.5	\$459.3	Infinite
Austin Fire	12/31/2007	\$608,218,896	1,511	15.70%	18.05%	\$584.4	\$2.4	0.6
Austin Police	12/31/2007	\$515,011,673	1,989	13.00%	18.25%	\$482.3	\$155.3	23.8
Dallas Police & Fire	12/31/2007	\$3,353,339,769	8,385	8.50%	27.50%	\$3,258.6	\$385.1	14
El Paso Fire	12/31/2007	\$338,222,091	1,347	15.28%	18.50% plus about \$60 million in 2009	\$317.9	\$114.0	Infinite
El Paso Police	12/31/2007	\$551,208,315	1,845	13.89%	18.50% plus about \$50 million in 2009	\$515.4	\$98.6	Infinite
Fort Worth Employees	9/30/2007	\$1,943,603,425	9,852	8.39%	15.96%	\$2,059.5	\$237.5	13.8
Galveston Police	12/31/2007	\$25,691,517	265	12.00%	9.53%	\$26.1	\$17.3	15.6
Houston Fire	6/30/2008	\$3,029,158,552	6,305	9.00%	23.80%	\$2,633.6	\$258.7	30*
Houston Municipal	6/30/2008	\$2,262,033,202	25,760 <sup>1</sup>	4.27% <sup>1</sup>	16.10% <sup>1</sup>	\$2,193.7 <sup>1</sup>	\$935.0 <sup>1</sup>	30*
Houston Police	6/30/2008	\$3,328,298,000	7,596	9.11%	19.60%	\$3,004.9	\$852.8	30*
San Antonio Fire & Police	9/30/2008	\$1,875,059,000	5,558	12.32%	24.64%	\$2,096.1	\$254.1	12.0

\*Houston Fire, Municipal, and Police have the 30-year closed amortization amount shown in the actuarial valuation while the amortization period would be infinite based on the actual contribution.

- Information based on 7/1/2007 Actuarial Valuation

January 2009

**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Teacher Retirement System of Texas**

**80TH LEGISLATIVE SESSION SUMMARY:**

**HB 2190 Truitt**

- The requirement that the director must have been a citizen of Texas for three years preceding the person's appointment is removed.
- The person is required to have executive ability and experience to carry out the duties of the office.

**HB 2358 Otto**

- An employer is required to immediately send certain money received for state contributions to the retirement system for deposit in the state contribution account, rather than the general revenue fund.
- The retirement system is required to deposit all money it receives into the state contribution account rather than the general revenue fund.

**HB 2427 Truitt**

- The TRS board of trustees is required to adopt policies governing retirement benefits counseling services that will make such counseling available to groups and individuals throughout the state.
- The board is required to adopt rules providing for the reduction of disability retirement benefits for members whose incomes exceed compensation earned before retirement and for the reinstatement of benefits for members whose incomes no longer exceed previous compensation.
- Disability retirees who receive reduced benefits may still participate in the group health insurance by paying a premium.

**SB 1039 Lucio**

- A retiree of TRS who returns to work at a public school after June 15, 2007, to continue employment beyond May 31, but not later than June 15 of that year, does not lose the monthly annuity payment in June.

**SB 1447 Duncan**

- Authority is granted to the board to invest and reinvest retirement system assets in any investment instrument commonly known as a security
- The board is authorized to delegate investment authority to TRS staff or a private investment manager, and the board is allowed to consider certain investment-related matters in closed session.
- Investments in hedge funds are restricted to no more than five percent of the value of the system's investment portfolio.

**SB 1846 Duncan**

- Trustees are authorized to require an increase in the rate of a member's contribution to not more than 6.58 percent of the member's annual salary.
- The state contribution rate to TRS may not be less than the member contribution rate during that fiscal year.
- TRS is required to make a one-time supplemental benefit payment to eligible annuitants equal to the lesser of \$2,400 or the amount of the annuitant's August 2007 regular annuity payment.

**SB 1877 Averitt**

- The relevant parts of amounts received for awards for student achievement, educator excellence, and mentoring programs are added.
- All salary amounts designated as health care supplementation to the definition of "salary and wages" required to be reported and deducted for member contributions to TRS and to credit in benefit computations are added.

**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Employees Retirement System of Texas (ERS)**

**Governing Statute**  
Art. XVI, Sec. 67,  
Texas Constitution

Subtitle B, Title 8,  
Government Code

**Actuarial Snapshot**

Actuarial Accrued Liability: \$ 25,403,279,942  
Actuarial Value of Assets: \$ 23,511,918,382  
Funded Ratio: 92.6%  
Amortization Period: Infinite  
Date of Valuation: August 31, 2008

**Executive Director**

Ann Fuelberg  
1801 Brazos  
Austin, Texas 78701  
(512) 867-7711

**Online Resources**

[www.ers.state.tx.us](http://www.ers.state.tx.us)

In November 1946, voters approved an amendment to the Texas Constitution to create a retirement fund for state employees. Officially established by the Legislature in 1947, ERS is responsible for overseeing retirement benefits for elected state officials and state employees. Other programs administered by ERS include the Texas Employees Group Benefits Program (GBP), TexFlex and Texa\$aver. In addition, ERS acts as the administrative and investment body for the Law Enforcement and Custodial Officers Supplemental Retirement Fund and the Judicial Retirement Systems Plans I and II.

**Employees Retirement System of Texas Board of Trustees**

Name	Position	Term Expires
Yolanda Griego, Chair	Elected Member	8/31/09
Cydney Donnell	Appointed by Governor	8/31/12
Don Green	Elected Member	8/31/13
I. Craig Hester	Appointed by Chief Justice	8/31/10
Owen Whitworth	Elected Member	8/31/11
Donald Wood	Appointed by Speaker	8/31/14

**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Law Enforcement and Custodial Officer Supplemental Retirement Fund (LECOSRF)**

**Governing Statute**  
Subtitle B, Title 8,  
Government Code

**Actuarial Snapshot**

Actuarial Accrued Liability: \$ 842,134,732  
Actuarial Value of Assets: \$ 774,508,817

Funded Ratio: 92.0%

Amortization Period: Infinite

Date of Valuation: August 31, 2008

**Executive Director**  
Ann Fuelberg  
1801 Brazos  
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(512) 867-7711

**Online Resources**  
[www.ers.state.tx.us](http://www.ers.state.tx.us)

LECOSRF was created by the Texas Legislature in 1979. It is a supplemental plan to ERS, and is administered by ERS. Membership is limited to law enforcement officers who have been commissioned by the Department of Public Safety, Texas Alcoholic Beverage Commission, Parks and Wildlife Department, and those members whose commissions are recognized by the Commission on Law Enforcement Officers Standards and Education. Membership is also provided to custodial officers employed by the Texas Department of Corrections and Parole Officers, and certified by the department as having direct contact with inmates. The supplemental benefits are available to any employee who completes 20 years of service in an eligible position.

**80<sup>TH</sup> LEGISLATIVE SUMMARY:**

**HB 2498 Toureilles**

- Hazardous duty pay is increased for certain full-time correctional officers employed by the Texas Department of Criminal Justice.
- The per year of service amount used to calculate hazardous duty pay is increased from \$10 to \$12.
- The hazardous duty pay cap is retained at \$300 per month for such correctional officers, but is removed for other state employees.

**TEXAS PENSION REVIEW BOARD  
GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Judicial Retirement System of Texas Plan One (JRS I)**

**Governing Statute**  
Subtitle D, Title 8,  
Government Code

**Executive Director**  
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**Online Resources**  
[www.ers.state.tx.us](http://www.ers.state.tx.us)

JRS I is a closed, pay-as-you-go retirement plan for state judges and justices who held office before September, 1985. The administration of this plan was transferred to ERS in 1954. No trust fund exists for JRS I, and all benefits are paid by direct appropriation as they become due. To reduce the long-term liabilities associated with a pay-as-you-go retirement system, this plan was replaced by the actuarially-funded Judicial Retirement System Plan II in 1985. Revisions in funding, benefits, service credit, and eligibility under JRS I require legislative action.

**80<sup>TH</sup> LEGISLATIVE SUMMARY:**

**HB 2882 Hughes**

- The formula used to calculate benefits is modified by changing the multiplier from 2 to 2.3 percent.
- The maximum retirement benefit is increased from 80 to 90 percent of state salary.
- Applies only to service beyond 20 years for JRS I & II, and beyond 12 years and rule-of-70 for appellant judges under JRS II.

**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Texas Municipal Retirement System (TMRS)**

**Governing Statute**

Subtitle G, Title 8,  
Government Code

**Actuarial Snapshot**

Actuarial Accrued Liability: \$ 19,278,800,000  
Actuarial Value of Assets: \$ 14,203,300,000  
Funded Ratio: 73.7%  
Amortization Period: 25 or 30 years  
Date of Valuation: December 31, 2007

**Executive Director/Chief Investment Officer**

Eric Henry  
1200 N I.H. 35  
Austin, Texas 78701  
(512) 476-7577

**Online Resources**

[www.tmrs.com](http://www.tmrs.com)

TMRS was established in 1948 and is an agent multiple-employer retirement system for employees of 827 municipalities in the state. Cities that participate in TMRS have their own retirement plans within the general framework of the TMRS Act. Plan provisions may vary from city to city depending upon the options selected by each individual municipality. Revisions to available options require legislative action. TMRS does not receive funds from the state and administrative costs are paid from the investment earnings of the fund.

**Texas Municipal Retirement System Board of Trustees**

Name	City	Term Expires
Carolyn Linér, Chair	San Marcos	2/01/13
Ben Gorzell, Vice Chair	San Antonio	2/01/13
H. Frank Simpson	Missouri City	2/01/09
Patricia Hernandez	Plainview	2/01/11
April Nixon	Arlington	2/01/09
Roel "Roy" Rodriguez	McAllen	2/01/11

**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Texas County & District Retirement System (TCDRS)**

**Governing Statute**  
Subtitle F, Title 8,  
Government Code

**Actuarial Snapshot**

Actuarial Accrued Liability: \$ 15,364,502,035  
Actuarial Value of Assets: \$ 14,482,972,740  
Funded Ratio: 94.2%  
Amortization Period: 15 years  
Date of Valuation: December 31, 2007

**Executive Director**

Gene Glass  
901 S Mopac  
Barton Oaks Plaza IV, Ste 500  
Austin, Texas 78746  
(512) 328-8889

**Online Resources**

[www.tcdrs.org](http://www.tcdrs.org)

TCDRS was created in 1967 by the Texas Legislature. TCDRS is an agent multiple-employer retirement system with 574 counties and districts who participate. Each county and district chooses the benefits offered to its employees from the options as set by the Legislature. TCDRS does not receive state funding; administrative costs are paid from the general reserves of the fund.

**Texas County & District Retirement System Board of Trustees**

Name	County	Term Expires
Robert A. Eckels, Chair	Harris	12/31/13
Bridget McDowell, Vice Chair	Taylor	12/31/13
Jerry Bigham	Randall	12/31/09
H.C. "Chuck" Cazalas	Nueces	12/31/11
Daniel R. Haggerty	El Paso	12/31/09
Jan Kennedy	Comal	12/31/09
Ed Miles, Jr.	Bexar	12/31/11
Bob Willis	Polk	12/31/13
Gerald "Buddy" Winn	Brazos	12/31/11

**TEXAS PENSION REVIEW BOARD  
GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Texas Emergency Services Retirement System (TESRS)**

**Governing Statute**

Subtitle H, Title 8,  
Government Code

**Actuarial Snapshot**

Actuarial Accrued Liability: \$ 64,227,341  
Actuarial Value of Assets: \$ 60,987,157  
Funded Ratio: 95%  
Amortization Period: 6 years  
Date of Valuation: August 31, 2008

**Commissioner**

Lisa Ivie Miller

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920 Colorado Street  
Austin, TX 78701  
(512) 936-3372

**Online Resources**

[www.ffpc.state.tx.us](http://www.ffpc.state.tx.us)

Created in 1977 as the Statewide Volunteer Fire Fighter's Retirement Act, the Act was amended in 1997 in order to include EMS personnel and in 2005 renamed TESRS. TESRS is administered by the Office of the Fire Fighters' Pension Commissioner and covers volunteer fire fighters in 186 municipalities which have chosen to participate in the fund. The fund was created as a funded alternative to numerous insolvent local volunteer funds operated under the Texas Local Fire Fighters' Retirement Act (TLFFRA). The state pays the administrative costs of this fund and has a statutory obligation to fund benefits when the department contributions are inadequate to fund the obligation.

**Texas Emergency Services Retirement System Board of Trustees**

<b>Name</b>	<b>City</b>	<b>Term Expires</b>
Frank Torres, Chair	Raymondville	9/01/11
Don Shipman	Colleyville	9/01/11
Dan Key	Friendswood	9/01/13
Ronald V. Larson	Horizon City	9/01/13
Kyle A. Donaldson	Sonora	9/01/09
Gracie G. Flores	Corpus Christi	9/01/09
Rex W. Klesel	Alvin	9/01/09
Maxie L. Patterson	Houston	9/01/13
Patrick Hull	Yoakum	9/01/11

**TEXAS PENSION REVIEW BOARD**  
**GUIDE TO PUBLIC RETIREMENT SYSTEMS OF TEXAS**

**Texas Local Fire Fighters Retirement Act (TLFFRA)**

**Governing Statute**  
Article 6243e, V.A.C.S.

**Commissioner**  
Lisa Ivie Miller  
E.O. Thompson Bldg., 11th Floor  
920 Colorado Street  
Austin, TX 78701  
(512) 936-3372

**Online Resources**  
[www.ffpc.state.tx.us](http://www.ffpc.state.tx.us)

Originally created in 1937 and named the Firemen's Relief and Retirement Fund, the Act was rewritten and renamed in 1989 to remove outdated, and sometimes contradictory, language. There are 41 fully paid fire departments and 80 volunteer departments that operate pension funds under TLFFRA. The state law provides general guidelines--including some investment restrictions, but leaves administration, plan design, contributions, and specific investments to the local boards. Plans operating under TLFFRA are entirely locally funded.

**80TH LEGISLATIVE SESSION SUMMARY:**

**HB 2799 McClendon**

- A political subdivision that is not located exclusively outside the boundaries of a municipality is authorized to organize under the act for the benefit of its paid employees unless it is governed by another state law providing for retirement benefits for full-time paid fire department personnel.

**HB 3731 Guillen**

- The existing text, requiring the board of trustees of the firefighters' retirement system and trust fund of which the person is a member to issue to the member a certificate of service, is removed.
- A person is required to be a participating member, rather than a member, of the retirement system to be elected a member of a board of trustees.

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Benefit Summary for Municipal Pension Plans Governed by State Statute**

<b>Retirement System</b>	<b>Retirement Eligibility</b>	<b>Basic Service Retirement Benefit</b>
<b>Austin Employees</b>	Age 55/20 YCS or Age 62 or 23 YCS	3.0% x (High 36 mos. Salary of Final Average Earnings of Final 120 mos.) x YCS
<b>Austin Fire</b>	25 YCS or Age 50/10 YCS	3.3% x (High 36 mos. Salary) x YCS Minimum: \$1,200/month
<b>Austin Police</b>	Age 55/20 YCS or Age 62 or 23 YCS	3.2% x (High 36 mos. Salary of Final 120) x YCS
<b>Dallas Police &amp; Fire</b>	Age 50/5 YCS	3% x (High 36 mos. Salary) x YCS (Maximum: 32 YCS); Minimum: \$2,200/month
<b>El Paso Fire &amp; Police</b>	Age 45/20 YCS	2.75% x (High Monthly Salary in last 12 mos.) x YCS; Maximum: 77% of High Monthly Salary in last 12 mos.
<b>Fort Worth Employees</b>  <b>Police:</b> 25 YCS (25 and Out Rule)	Age 65/5 YCS or Rule of 80  Age 65  Age 65	Beginning 4/1/99 3% x (High 36 mos. Avg. Annual Comp) x YCS Prior to 4/1/99 3% x (High 60 mos. Avg. Annual Comp) x YCS  1.35% x (Avg. Last 60 mos. Salary) x (YCS<15) + 1.65% x (Avg. Last 60 mos. Salary) x (YCS15-30)
<b>Houston Fire</b>	20 YCS	50.0% (Avg. of Member's Monthly Salary for Highest 78 pay periods) + [3.0% x (Avg. of Member's Monthly Salary for Highest 78 pay periods) x (YCS>20)] Maximum: 80% of Avg. of Member's Monthly Salary for Highest 78 pay periods
<b>Houston Police</b>	If hired before 10/9/2004: 20 YCS If hired after 10/9/2004: Age 55/10 YCS	If hired before 10/9/2004: 2.75% x FAS x YCS<20) + (2.0% x FAS x YCS>20) + \$5000 lump sum + \$150/mo to defray medical expenses If hired after 10/9/2004: 2.25% x FAS x YCS<20) + (2.0% x FAS x YCS>20), 80% max.

January 2009

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Asset Summary for Statewide Public Retirement Systems**

Retirement System	Fixed Income	Equities	Mutual Funds	Real Estate	Alternative	Cash	Other	Total Assets	Total Liabilities	Total Net Assets
Employees Retirement System <sup>2</sup>	\$11,353,600,224	\$15,845,857,324	-	\$22,300,072	-	\$188,812,429	\$248,370,082	\$27,658,940,131	\$6,194,675,008	\$21,464,265,123
Judicial Retirement System Plan I <sup>2</sup>	-	-	-	-	-	-	-	\$351,289	\$323,914	\$27,375
Judicial Retirement System Plan II <sup>2</sup>	\$94,727,432	\$132,207,871	-	\$126,562	-	\$1,789,800	\$37,593,741	\$266,445,406	\$51,404,846	\$215,040,560
Law Enforcement and Custodial Officer Supplemental Retirement Fund <sup>2</sup>	\$376,153,293	\$524,985,135	-	\$502,561	-	\$6,340,975	\$5,983,685	\$913,965,649	\$209,025,673	\$704,939,976
Teacher Retirement System <sup>2</sup>	\$35,717,959,103	\$50,917,099,622	-	-	\$36,814,882,798	\$949,974,780	\$603,351,788	\$125,003,268,091	\$20,092,770,546	\$104,910,497,545
Texas County & District Retirement System <sup>1</sup>	\$6,932,181,454	\$8,917,243,785	-	\$472,577,376	\$1,618,253,845	\$363,762,857	\$172,009,967	\$18,476,029,284	\$1,565,865,774	\$16,910,163,510
Texas Emergency Services Retirement System <sup>2</sup>	\$14,847,639	\$25,772,089	\$13,185,348	-	-	\$1,639,734	\$677,674	\$56,122,484	\$143,625	\$55,978,859
Texas Municipal Retirement System <sup>1</sup>	\$14,509,377,454	-	-	-	-	\$7,860,799,979	\$245,109,610	\$22,615,287,043	\$7,899,425,662	\$14,715,861,381

1. Fiscal Year: 12/31/2007
2. Fiscal Year: 8/31/2008

January 2009

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Asset Summary for Municipal Pension Plans Governed by State Statute**

Retirement System	Fixed Income	Equities	Mutual Funds	Real Estate	Alternative	Cash	Other	Total Assets	Liabilities	Total Net Assets
Austin Employees <sup>2</sup>	\$543,051,860	\$1,250,919,273	-	\$92,759,309	-	\$3,018,590	\$8,132,622	\$1,897,881,654	\$199,684,762	\$1,698,196,892
Austin Fire <sup>2</sup>	\$168,567,319	\$328,722,001	\$99,016,570	\$316,740	-	\$12,065,072	\$651,368	\$609,339,070	\$1,120,174	\$668,218,896
Austin Police <sup>2</sup>	\$135,747,163	\$231,442,148	-	\$136,259,976	\$10,170,242	\$113,277	\$1,974,988	\$515,707,794	\$696,121	\$515,011,673
Dallas Police & Fire <sup>2</sup>	\$466,278,469	\$1,752,541,603	\$73,954,679	\$811,647,760	-	\$248,420,807	\$1,949,763	\$3,354,793,082	\$1,453,313	\$3,353,339,769
El Paso Fire <sup>2</sup>	\$118,338,671	\$216,124,498	-	-	-	\$2,556,052	\$1,355,619	\$338,374,840	\$152,749	\$338,222,091
El Paso Police <sup>2</sup>	\$193,031,155	\$352,483,007	-	-	-	\$4,169,370	\$1,830,631	\$551,514,163	\$305,848	\$551,208,315
Fort Worth Employees <sup>1</sup>	\$296,140,279	\$1,113,092,447	\$334,596,597	-	\$202,142,512	\$189,832	\$34,729,319	\$1,980,890,986	\$37,287,561	\$1,943,603,425
Galveston Police <sup>2</sup>	\$8,198,054	\$15,863,991	-	-	-	\$1,126,109	\$503,363	\$25,691,517	\$0	\$25,691,517
Houston Fire <sup>3</sup>	\$1,093,574,897	\$1,799,532,335	-	\$173,178,093	\$142,358,591	\$4,807,070	\$52,112,106	\$3,265,563,092	\$236,404,540	\$3,029,158,552
Houston Municipal <sup>3</sup>	\$207,648,422	\$606,684,430	\$537,365,408	\$338,905,427	\$336,774,854	\$956,060	\$430,192,575	\$2,458,527,176	\$196,493,974	\$2,262,033,202
Houston Police <sup>3</sup>	\$1,388,826,000	\$1,454,653,000	-	-	\$968,618,000	\$123,000	\$38,189,000	\$3,850,409,000	\$522,111,000	\$3,328,298,000
San Antonio Fire & Police <sup>4</sup>	\$393,353,000	\$1,043,643,000	-	\$201,126,000	\$178,700,000	\$216,162,000	\$12,165,000	\$2,045,154,000	\$170,095,000	\$1,875,059,000

1. Fiscal Year: 9/30/2007

2. Fiscal Year: 12/31/2007  
 3. Fiscal Year: 6/30/2008  
 4. Fiscal Year: 9/30/2008

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Actuarial Valuation Summary for Statewide Public Retirement Systems**

<b>Retirement System Actuary and Valuation</b>	<b>Contributions</b>		<b>Normal Cost % Payroll</b>	<b>Actuarial Value of Assets \$Millions</b>	<b>Unfunded Actuarial Liabilities \$Millions</b>	<b>Amortization Period</b>
	<i>Member</i>	<i>Employer</i>				
<b>Employees Retirement System</b> Buck Consultants (08/31/2008)	6.00%	6.45%	13.37%	\$23,511.9	\$1,891.4	Infinite
<b>Judicial Retirement System I</b> Buck Consultants (08/31/2008)	6.00% for first 20 yrs	Appropriation As Needed	21.17%	\$0.0	\$289.7	N/A
<b>Judicial Retirement System II</b> Buck Consultants (08/31/2008)	6.00% for first 20 yrs	16.83%	19.26%	\$232.9	\$6.2	2.8
<b>Law Enforcement and Custodial Officer Supplemental Retirement Fund</b> Buck Consultants (08/31/2008)	0.00%	1.59%	2.18%	\$774.5	\$67.6	Infinite
<b>Teacher Retirement System</b> Gabriel, Roeder, Smith & Co. (08/31/2008)	6.40%	6.58%	10.42%	\$110,233.4	\$11,523.1	20.7
<b>Texas County &amp; District Retirement System</b> Milliman (12/31/2007)	4%, 5%, 6%, 7%	Actuarially Determined	Varies by Employer	\$14,483.0	\$881.5	15
<b>Texas Emergency Services Retirement Fund</b> Rudd & Wisdom (08/31/2008)	0.00%	\$24/month per member (\$36.00 for new departments) Varies by department	N/A*	\$61.0	\$3.2	6
<b>Texas Municipal Retirement System</b> Segal Company (12/31/2007)	5%, 6%, 7%	Actuarially Determined	Varies by City	\$14,203.3	\$5,075.5	25 or 30

*Texas Pension Board's guidelines state that contributions to a defined benefit plan should always cover the normal cost, and amortize any unfunded actuarial accrued liability over a period not to exceed 40 years.*

*\*Normal cost \$1.9 million; no covered payroll*

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Footnotes from Previous Page**

- (A) *Houston Fire, Municipal, and Police have the 30-year closed amortization amount shown in the actuarial valuation while the amortization period would be infinite based on the actual contribution.*
- (B) *Pending bond sales by 7/2009.*
- (C) *Previous rate was 9% as shown in the 12/31/07 Actuarial Valuation and it was increased to 13% on 10/1/07.*
- (D) *Previous rate was 18% as shown in the 12/31/07 Actuarial Valuation and it was increased to 18.25% on 1/1/09. It will increase again on 10/1/09 to 18.63%.*

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Actuarial Assumptions and Methods for Municipal Pension Plans Governed by State Statute**

Retirement System Actuary and Valuation Date	Actuarial Cost Method Amortization Method	Asset Valuation Method	Investment Rate of Return	Includes Inflation at	Projected Salary Increases	Cost of Living Adjustments
Austin Employees GRS (12/31/2007)	Entry Age Normal Level Percent Open	5-Year Smoothed Value	7.75%	3.50%	5.0% - 6.0%	None
Austin Fire Buck Consultants (12/31/2007)	Entry Age Normal Level Percent Open	5-Year Smoothed Value	7.75%	3.50%	4.5% - 16.6%	None
Austin Police Rudd and Wisdom (12/31/2007)	Entry Age Normal Level Percent Open	5-Year Smoothed Value	8.00%	4.00%	4.0% - 22.7%	None
Dallas Police & Fire Buck Consultants (01/01/2007)	Entry Age Normal Level Percent Open, reflecting lower cost for New Entrants	5-Year Smoothed Value	8.50%	4.00%	4.00% - 9.64%	4.00% for Members hired before 01/01/2007
El Paso Fire Buck Consultants (01/01/2008)	Entry Age Normal Level Percent Open	5-Year Smoothed Value	8.00%	4.00%	5.5% - 10.0%	3.00% for Members hired before 07/01/2007
El Paso Police Buck Consultants (01/01/2008)	Entry Age Normal Level Percent Open	5-Year Smoothed Value	8.00%	4.00%	5.5% - 10.0%	3.00% for Members hired before 07/01/2007
Fort Worth Employees Gabriel, Roeder, Smith & Co. (01/01/2008)	Entry Age Normal Cost for New Entrants used for all Active Members	5-Year Smoothed Value	8.50%	3.75%	5.25% - 29.75%	2.0% for Members with Guaranteed COLA, 0.0% for Members with conditional COLA
Galveston Police Rudd and Wisdom (1/1/2008)	Entry Age Normal Level Percent Open	5-Year Smoothed Value	7.50%	4.00%	4.0% - 10.2%	None
Houston Fire Buck Consultants (07/01/2007)	Entry Age Normal Level Percent Closed*	5-Year Smoothed Value	8.50%	3.00%	3.0% - 7.0%	3.00%
Houston Municipal Gabriel, Roeder, Smith & Co. (07/01/2007)	Entry Age Normal Cost for New Entrants used for all Active Members	5-Year Smoothed Value	8.50%	3.00%	3.0% - 5.5%	Three Tier: 3.00%, 2.00%, or 0.00% for Members hired after 12/31/2007
Houston Police Towers Perrin (07/01/2007)	Entry Age Normal Level Percent Closed*	5-Year Smoothed Value	8.50%	3.50%	3.0% - 10.0%	3.00%
San Antonio Fire & Police Segal (9/30/2008)	Entry Age Normal Level Percent Open	5-Year Smoothed Value	8.00%	4.25%	4.25%	Two Tier: 4.25% or 3.19%

\*Houston Fire, Municipal, and Police have the 30-year closed amortization amount shown in the actuarial valuation while the amortization period would be infinite based on the actual contribution.

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Glossary of Commonly Used Pension Terms**

<b>Actuarial Value of Assets</b>	A calculation made by an actuary who is preparing an actuarial valuation of a defined benefit plan, in order to assess fairly the value of a retirement plan's assets in a manner that reduces the volatility of short-term market fluctuations. An actuarial valuation should always state the method used to calculate the value of a plan's assets.
<b>Actuarial Assumptions</b>	Whenever an actuary calculates the long-term funding costs of a retirement system, certain assumptions are made as to the future of that plan. These assumptions represent the actuary's best projection of future plan experience, and are generally either economic or demographic. <b>Economic assumptions</b> include anticipated inflation ranges and performance of the fund's assets in the overall investment universe. <b>Demographic assumptions</b> tend to be more specific to the plan being evaluated, and are dependent on such factors as the age and life expectancy of plan members.
	The primary assumptions, that is, the assumptions that have the most significant impact on the statement of plan liabilities, used by most actuaries include the rate of interest earnings on investments (the <b>interest assumption</b> ), the rate of anticipated salary increases for plan members (the <b>salary increase assumption</b> ), and the anticipated increase in the size of the covered payroll of the plan (the <b>payroll growth assumption</b> ). The actuarial assumptions are not considered independently of one another, and should be reasonable when considered as a group. For example, a very high salary increase assumption and a very low payroll growth assumption would be unlikely, since similar factors influence both numbers. The distance between the interest and salary increase rates assumed in valuation is called the <b>spread</b> . Other assumptions include withdrawal rates for covered employees, mortality rates, expected ages at retirement, etc. The accuracy of any actuarial projection depends largely on how closely actual experience matches the assumptions made in the projection over the long term.
<b>Actuarial Accrued Liability</b>	That portion, as determined by a particular Actuarial Cost Method of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by the future Normal Costs.
<b>Actuarial Valuation</b>	A review of the adequacy of a retirement plan's financing arrangement at a particular point in time, which may serve as a basis for determining the amount of funding needed to provide benefits to employees and retirees covered by a <b>defined benefit</b> plan. The valuation is dependent on <b>actuarial assumptions</b> , calculates the cost of benefits currently being earned, benefits due for past service, and benefits anticipated to be earned in the future. Public <b>defined benefit</b> plan valuations are required by state law to be made at least once every three years, but may be made annually or biennially.

January 2009

**TEXAS PENSION REVIEW BOARD**  
**Guide to Public Retirement Systems of Texas**

**Glossary of Commonly Used Pension Terms**

<b>Fiduciary</b>	A person who exercises discretionary authority or control over the management of a retirement plan or its assets, and who is responsible or liable for decisions affecting the plan or fund. In the state systems, fiduciary responsibility resides with the Board of Trustees. Some other systems allow delegation of fiduciary authority to professional investment advisers or managers.
<b>Funding Ratio</b>	The actuarial value of assets expressed as a percentage of the actuarial accrued liability.
<b>Normal Cost</b>	The portion of a <b>defined benefit</b> retirement plan's liability allocated to a single plan year under an actuarial cost method. This cost is usually expressed as a percentage of the annual payroll of employees covered by the plan. Under the cost methods used by most public plans, a plan's normal cost should remain relatively constant from year to year, unless the plan's benefit design changes or significant demographic change occurs in the covered group of employees. Pension Review Board guidelines state that contributions to a defined benefit plan should always cover the normal cost, and amortize any <b>unfunded actuarial accrued liability</b> over a period not to exceed 40 years.
<b>Overfunded Actuarial Accrued Liability</b>	If the actuarial value of assets and anticipated future normal cost contributions of a <b>defined benefit</b> pension plan exceed the plan's projected benefit obligations, the plan may be said to have an overfunded actuarial accrued liability.
<b>Prudent Person Rule</b>	A standard of fiduciary care applicable to trustees of retirement funds. The rule requires that a trustee invest public money in the manner of persons of ordinary prudence, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income as well as the probable safety of the capital to be invested. All Texas public retirement funds are subject to the Prudent Person Rule, though many have additional "legal lists" of investments.
<b>Unfunded Actuarial Accrued Liability</b>	That portion of a <b>defined benefit</b> retirement plan's obligations not covered by the <b>actuarial value of assets</b> or by future <b>normal cost</b> contributions. This portion of a plan's obligation can be funded by contributions above the level needed to pay the plan's <b>normal cost</b> , which will result in an amortization of the amount over the plan's <b>funding period</b> . A fund with assets in excess of its obligations may be said to have <b>negative unfunded actuarial accrued liability</b> or an <b>overfunded actuarial accrued liability</b> .

January 2009